CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD SAN DIEGO REGION

9771 Clairemont Mesa Blvd., Ste. B San Diego, California 92124-1331 Telephone: (619) 265-5114



May 13, 1987

CERTIFIED - RETURN RECEIPT REQUESTED

Mr. Peter D'Amico Manager, Environmental Affairs Thrifty Oil Company 10000 Lakewood Boulevard Downey, California 90240

Dear Mr. D'Amico:

CLEANUP AND ABATEMENT ORDER NO. 87-93

Enclosed please find a copy of Cleanup and Abatement Order No. 87-93. This Cleanup and Abatement Order is being issued to Thrifty Oil Company under the authority of California Water Code Section 13304 in response to the unauthorized release of fuel hydrocarbons from the underground storage tank system at Thrifty service station no. 114 located at 9009 Carlton Hills Boulevard in Santee. The fuel discharge has resulted in the contamination of soil with up to 5,100 ppm total petroleum hydrocarbons and the underlying ground water with up to 16.8 mg/l total petroleum hydrocarbons.

Basically, the Cleanup and Abatement Order directs Thrifty Oil Company to clean up the petroleum hydrocarbon contamination resulting from the unauthorized fuel release at service station no. 114. Upon approaching the final phase of cleanup, the Order directs the responsible parties to develop and determine the cost of cleanup strategies for a range of potential final cleanup levels. The Order directs the responsible parties to implement the cleanup alternative selected by Regional Board staff after staff's review of the cleanup alternatives developed by Thrifty Oil Company. The Order also requires Thrifty Oil Company to submit quarterly progress reports to this office until, in the opinion of the Executive Officer, the cleanup can be considered complete. A copy of these quarterly progress reports should also be submitted to the Hazardous Materials Management Unit of the County of San Diego Department of Health Services. The first quarterly progress report is due no later than July 30, 1987.

In order to avoid further enforcement action by the Regional Board, I strongly urge a prompt and complete response to each directive of Cleanup and Abatement Order No. 87-93. The issuance of this Cleanup and Abatement Order to Thrifty Oil Company will be discussed at the June 15, 1987 Regional Board meeting. This meeting is open to public participation and you are welcome to attend. It is scheduled for 9:00 a.m. in Room B-109 of the State Office Building, 1350 Front Street, San Diego.

May 13, 1987

If you have any questions, please call Mr. Scott Hugenberger at (619) 265-5114.

Very truly yours,

LADIN H. DELANEY Executive Officer

SH:hd

Enclosure

cc: (with enclosure)

Ms. Victoria Gallagher Hazardous Materials Management Unit Department of Health Services County of San Diego 1700 Pacific Highway San Diego, CA 92101 State of California Regional Water Quality Control Board San Diego Region

EXECUTIVE OFFICER SUMMARY REPORT July 27, 1987

ITEM:

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SUBJECT:

CLEANUP AND ABATEMENT ORDER NO. 87-93, THRIFTY OIL COMPANY

SERVICE STATION NO. 114

DISCUSSION:

Thrifty Oil Company Service Station No. 114 is located at 9009 Carlton Hills Boulevard in Santee. In September, 1986, Thrifty Oil Company voluntarily submitted a site assessment report to this office which revealed the presence of petroleum hydrocarbon contamination at the Thrifty Service Station No. 114. Subsequent investigation by Thrifty Oil Gompany showed that the soil and the ground water contains as much as 5100 ppm and 16.8 ppm total petroleum hydrocarbons, respectively.

On May 12, 1987, the Executive Officer issued Cleanup and Abatement Order No. 87-93 to Thrifty Oil Company in response to the presence of soil and ground water contamination at Thrifty Service Station No. 114. The Cleanup and Abatement Order directs the discharger to clean up the petroleum hydrocarbon contamination resulting from the unauthorized fuel release from the underground storage tank system and to submit quarterly progress reports for the remainder of the cleanup program.

ISSUE:

Does Thrifty Oil Company have any objections to the issuance

of Cleanup and Abatement Order No. 87-93?

RECOMMENDATION:

Staff will make a brief presentation on this item if

necessary.

SGH:ac

Clerical Information Form (Please check applicable information for work desired)

(THIS FORM MUST ACCOMPANY ALL WORK TO BE PROCESSED BY THE TYPISTS)

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FOR MATERIAL SUBMITTED FOR TYPING, PLEASE ATTACH ANY BACKGROUND MATERIAL AVAILABLE FOR REFERENCE.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD SAN DIEGO REGION

CLEANUP AND ABATEMENT ORDER NO. 87-93

THRIFTY OIL COMPANY
SERVICE STATION NO.114
9009 CARLTON HILLS BOULEVARD, SANTEE
SAN DIEGO COUNTY

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board), finds that:

- The Thrifty Oil Company Service Station No. 114 is located at 9009
 Carlton Hills Boulevard in Santee. The gasoline service station lies in
 the Santee Hydrographic Subarea of the Lower San Diego Hydrographic
 Subunit.
- 2. As used in this Cleanup and Abatement Order, "contamination" shall be defined as follows unless otherwise stated:

"Contamination refers to soil or ground water which contains waste or waste constituents which are not naturally occurring, or which contain waste or waste constituents in concentrations exceeding the naturally occurring background concentrations."

- 3. On September 15, 1986, this office received a "Contaminant Assessment Report" dated August 18, 1986 from Thrifty Oil Company. The report contains the results of a site investigation that ARCO Petroleum Products Company voluntarily undertook at the Thrifty Oil Company gasoline service station No. 114. The report includes the following information:
 - a. Five borings were drilled, two of which were subsequently converted into ground water monitoring wells.
 - b. Ground water was encountered at six feet below grade.
 - Soil samples collected from the borings were found to contain up to
 41 ppm total petroleum hydrocarbons.
 - d. Ground water samples collected from the two monitoring wells contained 2.4 and 7.2 ppm total petroleum hydrocarbons.
- 4. On December 11, 1986, this office received a site assessment report from Thrifty Oil Company dated November 24, 1986. The report contains the results of a follow-up investigation that Thrifty Oil Company had conducted in response to the discovery of soil and ground water contamination described in Finding 2 above. The November 24, 1986 report contains the following information:
 - a. Four borings were drilled which were subsequently converted to ground water monitoring wells.

- b. A soil sample collected from monitoring well MW-l at five feet below grade contained 5,100 ppm total petroleum hydrocarbons. All other soil samples contained less than 5 ppm total petroleum hydrocarbons.
- c. All four monitoring wells showed detectable levels of petroleum hydrocarbons in the ground water. The ground water from monitoring well MW-1, which is located near the tank cluster, contained over 16.8 mg/l total petroleum hydrocarbons, including 3.0 mg/l benzene.
- d. The extent of the dissolved petroleum hydrocarbon ground water contamination plume appears to be adequately defined. The plume extends off-site.
- 5. The Comprehensive Water Quality Control Plan Report, San Diego Basin (9) (Basin Plan) was adopted by this Regional Board on March 17, 1975; approved by the State Water Resources Control Board (State Board) on March 20, 1975; and updated by the Regional Board on February 27, 1978; March 23, 1981; January 24 and October 3, 1983; and August 27, 1984. The 1978, 1981, 1983 and 1984 updates were subsequently approved by the State Board.
- 6. The Basin Plan established the following uses as the potential and existing beneficial uses for the ground water in the lower San Diego Hydrographic Subunit:
 - a. Municipal and domestic supply
 - b. Agricultural supply
 - c. Industrial service supply
 - d. Industrial process supply
 - e. Ground water recharge
- 7. The Basin Plan established the following uses as the beneficial uses for the surface waters in the lower San Diego Hydrographic Subunit:
 - a. Municipal and domestic supply
 - b. Industrial service supply
 - c. Ground water recharge
 - d. Water contact recreation
 - e. Noncontact water recreation
 - f. Warm freshwater habitat
 - g. Cold freshwater habitat
 - h. Wildlife habitat
 - i. Preservation of rare and endangered species
- 8. The quality of the ground water underlying the Thrifty Oil Company service station No. 114 is subject to the provisions of the State Board's Resolution No. 68-16, Statement of Policy With Respect to Maintaining High Quality Waters in California (hereinafter referred to as the Nondegradation Policy). Under the terms and conditions of the Nondegradation Policy, the existing (pre-discharge) ground water quality of the Lower San Diego Hydrographic Subunit must be maintained unless it

is demonstrated that a decrease in water quality (a) will be consistent with maximum benefit to the people of the state, (b) will not unreasonably affect beneficial uses, and (c) will not result in water quality less than prescribed in the Basin Plan or other adopted policies.

9. Section 13050(1) of the California Water Code defines "pollution" and "contamination" as follows:

"Pollution means an alteration of the quality of the waters of the State by waste to a degree which unreasonably affects (a) such waters for beneficial uses, or (b) facilities which serve such beneficial uses."

"Contamination means an impairment of the quality of the waters of the state by waste to a degree which creates a hazard to the public health through poisoning or through the spread of disease. "Contamination" shall include any equivalent effect resulting from the disposal of waste, whether or not waters of the state are affected."

10. To protect the beneficial uses listed in Finding 6, it is necessary that the ground water underlying the Thrifty Oil Company service station site not contain constituents in concentrations exceeding the following Regional Board and State Department of Health Services Action Levels:

Constituent Maximum Allowable Concentration

Benzene	0.70	$\mu g/1$
Toluene	100	$\mu g/1$
Total Xylenes	620	$\mu g/1$
Ethylbenzene	680	$\mu g/1$
Total Petroleum Hydrocarbons	1.0	mg/l
Total Lead	50	$\mu g/1$
Ethylene Dibromide	20	$\mu g/1$

- 11. The unauthorized discharge of petroleum hydrocarbons from the Thrifty Oil Company underground storage tank system has caused pollution and contamination conditions in state waters as defined in Finding 9 in accordance with the following rationale:
 - a. Petroleum hydrocarbon constituents discharged from the underground storage tank system have migrated to the underlying ground water.
 - b. The concentrations of the fuel constituents in the underlying ground water, described in Findings 3 and 4, exceed the levels listed in Finding 10.

Therefore, the quality of the ground water has been degraded, impairing its use as an existing or potential municipal and domestic supply.

- 12. On January 30, 1987, this office received a remedial action proposal from Thrifty Oil Company prepared by Groundwater Technology, Incorporated and dated December 12, 1986. The remedial action proposal describes a method for removing the fuel contaminated ground water but does not address the overlying soil contamination.
- 13. This enforcement action is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000 et seq.) in accordance with Section 15321, Chapter 3, Title 14, California Administrative Code.

IT IS HEREBY ORDERED, That pursuant to Section 13304 of the California Water Code, Thrifty Oil Company shall comply with the following directives:

- 1. Thrifty Oil Company shall take immediate effective remedial action:
 - a. To immobilize the dissolved product plume of petroleum hydrocarbon contaminated ground water and any free product plume should it be encountered.
 - To protect the beneficial uses of the ground water of the Lower San Diego Hydrographic Subunit;
 - c. To remove all free petroleum hydrocarbon product from the ground water; and
 - d. To clean up the petroleum hydrocarbon ground water and soil contamination to the Regional Board's satisfaction.
- Thrifty Oil Company shall submit monitoring reports to this office on a quarterly basis until, in the opinion of the Regional Board Executive Officer, the site has been cleaned up. The monitoring reports shall describe the progress made in the cleanup operations and shall demonstrate that the petroleum hydrocarbon waste released from the Thrifty Oil Company service station has been and remains immobilized. The quarterly monitoring reports shall include, but not be limited to, the following information:
 - a. A description of the remedial actions employed by Thrifty Oil Company.
 - b. Quantity of petroleum hydrocarbon product recovered for the quarter and the total to date.
 - c. Quantity of ground water extracted for the quarter, the total to date, and its ultimate disposal point.
 - d. The water levels and product thicknesses in all of the wells.

- e. Any information necessary to demonstrate that the petroleum hydrocarbon contamination resulting from the unauthorized release from the underground tank system at the Thrifty Service Station is fully contained and immobilized.
- f. A map of the site with hydrologic contours showing the ground water flow pattern and the locations of all of the wells.
- g. A map of the site showing the boundary of the free petroleum hydrocarbon product plume and also of the dissolved product ground water plume.
- h. A ground water sample should be collected from each monitoring well and analyzed for total petroleum hydrocarbons. At least one ground water sample within the contamination plume should be analyzed for:

(1) Benzene	(4) Ethylbenzene
(2) Toluene	(5) Total Petroleum Hydrocarbons
(3) Total Xvlenes	(6) Total Lead

The quarterly monitoring reports shall be submitted to this office in accordance with the following schedule:

Reporting Period	Date Due		
January, February, March	April 30		
April, May, June	July 30		
July, August, September	October 30		
October, November, December	January 30		

- 3. Upon direction of the Executive Officer at some point in the future, before the hazardous substance spill site cleanup program can be terminated, Thrifty Oil Company shall submit a report to this office identifying and developing a range of remedial action alternatives for the final phase of the cleanup program. The report shall examine and determine the cost of a cleanup strategy capable of achieving each of the following potential final cleanup levels in the affected ground water zone:
 - a. Treatment and/or removal of the contaminated ground water to attain the naturally occurring background concentrations for the following constituents in the underlying ground water aquifer:
 - (1) Benzene
 - (2) Toluene
 - (3) Ethylbenzene
 - (4) Total Xylenes
 - (5) Total Petroleum Hydrocarbons
 - (6) Lead

This cleanup alternative represents basically complete cleanup of contamination resulting from the petroleum hydrocarbon discharge.

b. Treatment and/or removal of the contaminated ground water to attain the following concentrations in the underlying ground water aquifer:

Constituent	Maximum Concentration			
Benzene	0.70 µg/l			
Toluene	100.0 ug/l			
Ethylbenzene	680 μg/l			
Total Xylenes	$620 \mu g/1$			
Total Petroleum Hydrocarbons	1.0 mg/l			
Lead	50.0 μg/l			

- c. A remedial action alternative proposing the attainment of petroleum hydrocarbon concentrations less stringent than those specified in a. and b. This alternative concedes the affected ground water to a degraded status. It will be necessary to establish, to the satisfaction of the Regional Board, that the petroleum hydrocarbon concentrations being proposed by Thrifty Oil Company under this alternative would comply with the following criteria in accordance with the State's nondegradation policy:
 - (1) The proposed petroleum hydrocarbon concentrations to be attained in the affected ground water contamination zone would not unreasonably affect the beneficial uses listed in Finding 6.
 - (2) The proposed petroleum hydrocarbon concentrations to be attained in the affected ground water contamination zone will be consistent with the maximum benefit to the people of the state.
 - (3) The proposed petroleum hydrocarbon concentrations to be attained in the affected ground water contamination zone will not result in water quality less than prescribed in the Basin Plan or other adopted policies.

All free petroleum hydrocarbon product must be removed under all three alternatives.

4. The cleanup alternatives required under Directive 3 of this Order will be evaluated in detail by Regional Board staff. This evaluation will include technical considerations, estimated costs, and anticipated water quality impacts associated with each alternative. Based on this evaluation a specific cleanup alternative will be selected by Regional Board staff for implementation. Upon notification by the Executive Officer, Thrifty Oil Company shall implement the cleanup alternative selected by Regional Board staff. If, however, Thrifty Oil Company wishes implement cleanup alternative 3a., the Company will not be required to develop cleanup strategies corresponding to alternative 3b. and 3c. If Thrifty Oil Company wishes to implement cleanup alternative 3b., the Company will not be required develop a cleanup strategy corresponding to alternative 3c.

Cleanup and Abatement Order No. 87-93

- 5. Thrifty Oil Company shall remove and/or treat all contaminated soil containing Total Extractable Petroleum Hydrocarbons in concentrations exceeding 100 mg/kg, unless Thrifty Oil Company can demonstrate (a) to the Regional Board staff's satisfaction that higher soil concentrations will not act as a source of petroleum hydrocarbon contaminants to the underlying ground water by, for example, infiltration and leaching processes; and (b) to the County of San Diego Department of Health Services' satisfaction that higher soil concentrations will not present a threat to the public or environmental health.
- 6. Thrifty Oil Company shall dispose of petroleum hydrocarbon contaminated ground water and/or soil in accordance with all applicable local, state and federal regulations.
- 7. After Thrifty Oil Company demonstrates to the Regional Board staff's satisfaction that the final cleanup levels have been achieved throughout the soil and ground water contamination zones, Thrifty Oil Company shall continue to monitor the ground water and submit quarterly monitoring reports in accordance with Directive 2 of this Order for a period of one year. If at any time during this post-cleanup monitoring the data indicate that the final cleanup levels have not been maintained, or that the soil is continuing to act as a source of ground water contamination, Thrifty Oil Company shall immediately resume appropriate remedial cleanup actions. If, on the other hand, the final cleanup levels have not been exceeded for the year of monitoring, then no further ground water monitoring will be required.

Ladin H. Delaney
Executive Officer

May 12, 1987

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PS Form 2811, Feb. 1986	87		S. Signature - Addressee	ANE ANE		Manager, Environmental Affairs Thrifty Oil Company	3. Article Addressed to: Ar . Peter D Amico	El Show to whom delivered, date pad extrasser's editress	card from being returned to you. The return receipt fee will provide you the name of the person tellured to and the case of delivery. For additional less the following services and explicitle. Consult postmatter for tess and check toxics) for additional less the following services are available. Consult postmatter for tess and check toxics) for additional services of the return to test and check toxics).	SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4. I you'r arches in the "BETHIRD TO" move at the services are desired, and complete items 3 and 4.
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